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09828343BA

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CD(s) containing:

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Doc Code: Computer

pages of specification

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content unspecified or combined

Doc Code: Artifact

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Artifact Type Code: P

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Artifact Type Code: S

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Artifact Type Code: U

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Stapled Set(s) Color Documents or B/W Photographs

Doc Code: Artifact Artifact Type Code: C

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Microfilm(s)

Doc Code: Artifact Artifact Type Code: F

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Video tape(s)

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Bound Document(s)

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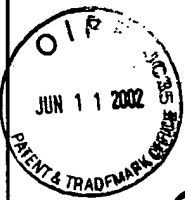
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Other, description: _____

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The United States of America



The Commissioner of Patents and Trademarks

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.

Acting Commissioner of Patents and Trademarks

Attest

United States Patent [19]

Dillon et al.

[11] Patent Number: 5,891,021

[45] Date of Patent: Apr. 6, 1999

[54] PARTIALLY RIGID-PARTIALLY FLEXIBLE ELECTRO-OPTICAL SENSOR FOR FINGERTIP TRANSLUMINATION

[75] Inventors: Andrew Joseph Dillon, Austin; Jeffrey
Albert Secunda, Dallas; Todd
Johnson Daniel, Frisco, all of Tex.

[73] Assignee: Perdue Holdings, Inc., Dallas, Tex.

[21] Appl. No.: 89,523

[22] Filed: Jun. 3, 1998

[51] Int. Cl.⁶ A61B 5/00

[52] U.S. Cl. 600/310; 600/344

[58] Field of Search 600/310, 322,
600/323, 340, 344, 473, 476

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Primary Examiner—Cary E. O'Connor

Assistant Examiner—Eric F. Winakur

Attorney, Agent, or Firm—Andrew J. Dillon

[57] ABSTRACT

A sensor is provided for transillumination of a blood-profused portion of a human fingertip. The sensor includes an opaque, semi-cylindrical substantially rigid cradle member having a photosensor mounted to a concave surface thereof such that ambient light cannot penetrate the cradle member and induce erroneous readings. A flexible planar web-like support structure is attached at one end thereof to the cradle member and includes a light source mounted within the web thereof. A repositionable adhesive coating on the concave surface of the cradle member holds the fleshy portion of a human fingertip in conformance therewith, and when the flexible planar web-like support structure is wrapped around a fingertip within the cradle member, the light source overtakes the photosensor for transillumination of the fingertip.

18 Claims, 2 Drawing Sheets

